WHAT IS CLAIMED IS:

1. A system for controlling the execution of a program in an information processor for processing instructions by pipelining, the system comprising:

means for providing a set of instructions including an execution control instruction, the execution control instruction containing a condition field and an instruction-specifying field, the condition field specifying an execution condition, the instruction-specifying field defining, in binary code, the number of instructions to be executed only conditionally;

means for deciding whether or not the execution condition that has been specified by the condition field is satisfied; and

means for determining based on the outcome of the decision whether or not said number of instructions, which number has been defined by the instruction-specifying field for instructions succeeding the execution control instruction, should be nullified.

2. A method for controlling the execution of a program in an information processor for processing instructions by pipelining, the method comprising the steps of:

a) providing an execution control instruction, the execution control instruction containing a condition field

23

and an instruction-specifying field, the condition field specifying an execution condition, the instruction-specifying field defining, in binary code, the number of instructions to be executed only conditionally;

b) deciding whether or not the execution condition that has been specified by the condition field is satisfied; and

c) determining based on the outcome of the decision step b) whether or not said number of instructions, which number has been defined by the instruction-specifying field for instructions succeeding the execution control instruction, should be nullified.

3. The method of claim 2, wherein the condition field is a single field for specifying the execution condition, and

wherein the instruction-specifying field is a single field for defining the instruction number, and

wherein the step c) comprises the sub-step of regarding said number of instructions, which number has been defined by the instruction-specifying field for instructions succeeding the execution control instruction, as instructions to be executed only conditionally, and nullifying the conditionally executable instructions if the execution condition that has been specified by the condition field is not satisfied.

4. The method of claim 3, wherein the step c) further

comprises the sub-step of executing the conditionally executable instructions if the execution condition that has been specified by the condition field is satisfied.

5. The method of claim 2, wherein the condition field is a single field for specifying the execution condition, and

wherein the instruction-specifying field is a single field for defining the instruction number, and

wherein the step c) comprises the sub-steps of:

regarding said number of instructions, which number has been defined by the instruction-specifying field for instructions succeeding the execution control instruction, as a first set of conditionally executable instructions, and nullifying the first set of conditionally executable instructions if the execution condition that has been specified by the condition field is not satisfied; and

regarding said number of instructions, which number has been defined by the instruction-specifying field for instructions succeeding the first set of conditionally executable instructions, as a second set of conditionally executable instructions, and nullifying the second set of conditionally executable instructions if the execution condition that has been specified by the condition field is satisfied.

6. The method of claim 5, wherein the step c) further comprises the sub-steps of:

getting the first set of conditionally executable instructions executed if the execution condition that has been specified by the condition field is satisfied; and

getting the second set of conditionally executable instructions executed if the execution condition that has been specified by the condition field is not satisfied.

7. The method of claim 2, wherein the condition field is a single field for specifying the execution condition, and

wherein the instruction-specifying field contains first and second instruction-specifying sub-fields, which respectively define, in binary code, first and second numbers of instructions to be executed only conditionally, and

wherein the step c) comprises the sub-steps of:

regarding the first number of instructions, which number has been defined by the first instruction-specifying sub-field for instructions succeeding the execution control instruction, as a first set of conditionally executable instructions, and nullifying the first set of conditionally executable instructions if the execution condition specified by the condition field is not satisfied; and

regarding the second number of instructions, which number has been defined by the second instruction-specifying

sub-field for instructions succeeding the first set of conditionally executable instructions, as a second set of conditionally executable instructions, and nullifying the second set of conditionally executable instructions if the execution condition specified by the condition field is satisfied.

8. The method of claim 7, wherein the step c) further comprises the sub-steps of:

getting the first set of conditionally executable instructions executed if the execution condition that has been specified by the execution field is satisfied; and

getting the second set of conditionally executable instructions executed if the execution condition that has been specified by the execution field is not satisfied.

9. The method of claim 2, wherein the condition field includes multiple condition sub-fields, each specifying a single associated execution condition, and

wherein the instruction-specifying field is a single field for defining the instruction number, and

wherein the step c) comprises a plurality of sub-steps, and

wherein in each said sub-step, said number of instructions, which number has been defined by the

instruction-specifying field for instructions succeeding the execution control instruction, are regarded as conditionally executable instructions, and, if the execution condition specified by associated one of the condition sub-fields is not satisfied, the conditionally executable instructions at a location corresponding to the execution condition specified are nullified.

10. The method of claim 9, wherein the step c) comprises a plurality of sub-steps,

wherein in each said sub-step, if the execution condition specified by associated one of the condition sub-fields is satisfied, the conditionally executable instructions at a location corresponding to the execution condition specified are executed.

11. The method of claim 2, wherein the condition field includes multiple condition sub-fields, each specifying a single execution condition, and

wherein the instruction-specifying field includes multiple instruction-specifying sub-fields corresponding to the respective condition sub-fields, each said instruction-specifying sub-field defining an associated instruction number in binary code, and

wherein the step c) comprises a plurality of sub-steps,

28

and

wherein in each said sub-step, said number of instructions, which number has been defined by associated one of the instruction-specifying sub-fields for instructions succeeding the execution control instruction, are regarded as conditionally executable instructions, and, if the execution condition specified by associated one of the condition sub-fields is not satisfied, the conditionally executable instructions at a location corresponding to the execution condition specified are nullified.

12. The method of claim 11, wherein the step c) comprises a plurality of sub-steps,

wherein in each said sub-step, if the execution condition specified by associated one of the condition sub-fields is satisfied, the conditionally executable instructions at the location corresponding to the execution condition specified are executed.